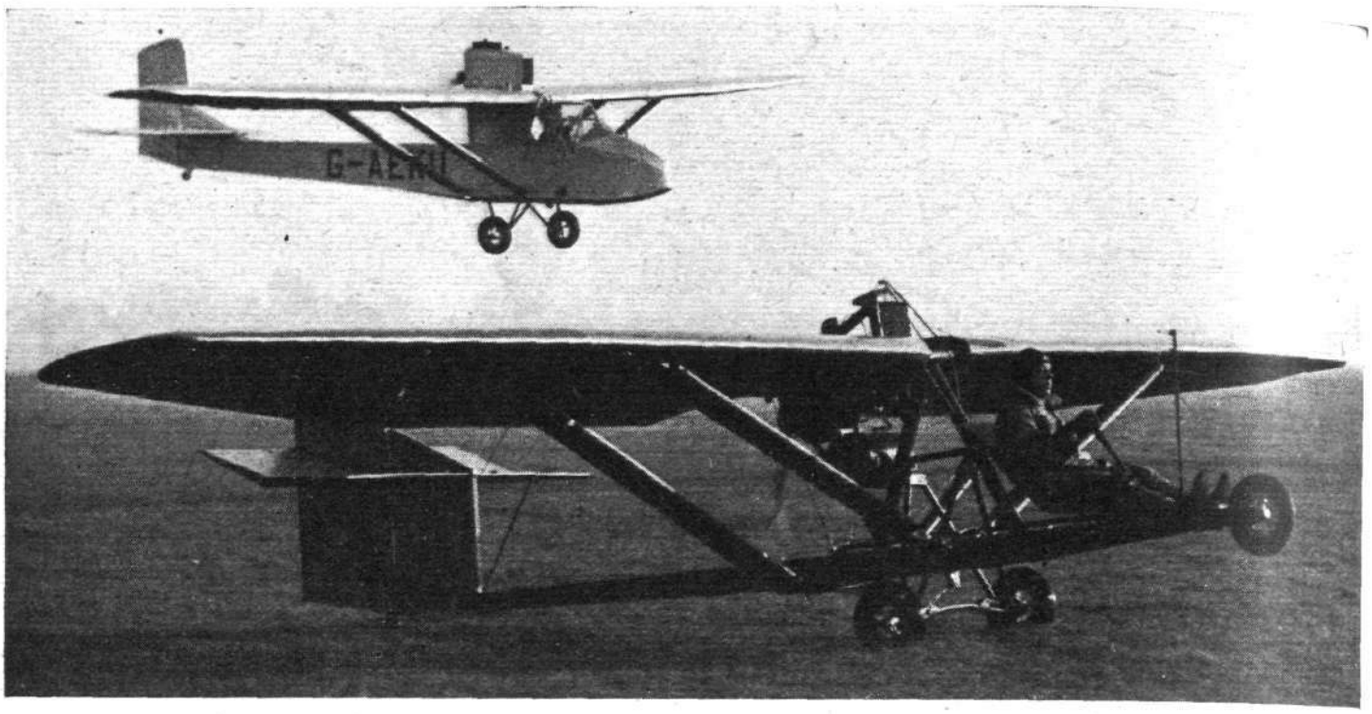


A De Luxe Drone flying above a Flying Trainer, which, in this picture, is being handled by Mr. Kronfeld himself. The 1937 De Luxe model has been slightly modified in order to reduce the airscrew noise which has previously been the Drone's one drawback. (*Flight* photograph.)

quirements of the Duke of Richmond and Gordon, and the combination of a private owner's experience with that of a test pilot's would be expected to result in something interesting.

Reliability, easy flying characteristics, a good view, and ample room for the occupants were the main ideas behind the development of the Autoplane, as the machine is known. Certainly, it is one of the roomiest in the smaller class, and, in spite of the comparatively low power provided by the two Continental flat-fours fitted to the prototype, the take-off is quite remarkable and the climb well up to light aeroplane standard even when there are three people on board. This prototype is fitted with a new type of control system by which all manœuvres can be carried out with one hand. At the top of each of the normal control columns there is a small wheel which takes the place of the more usual rudder bar. Although there is no reason to suppose that production machines will necessarily incorporate this feature, the pilot is soon used to it.

No very definite performance figures can yet be given, but at 2,300 r.p.m. the machine appears to cruise at about 85 m.p.h., and the landing speed is about 40 m.p.h.

The address of the sponsors is Horden-Richmond Autoplane, 12, Norfolk Crescent, London, W.2.

Kronfeld

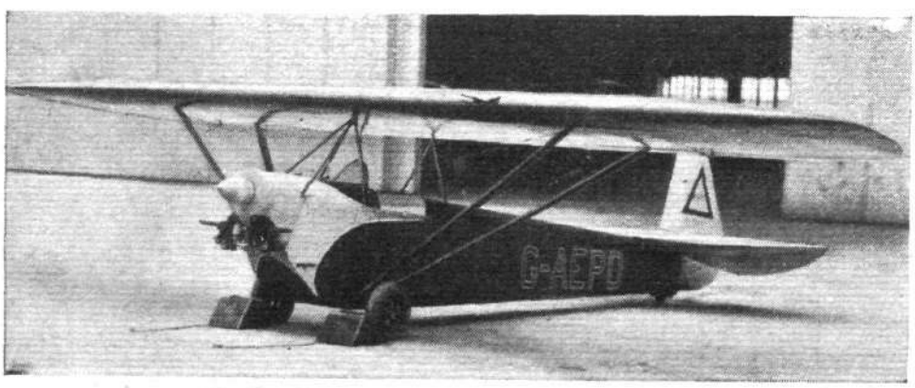
TO the Drone and its sponsors must go most of the credit for the more recent development of ultra-light machines in general. As originally produced in 1931 by the late Mr. Lowe-Wylde, the Drone was, in fact, little more than a two-seater glider fitted with a motor-cycle engine, but since that time it has been developed into a real flying machine of a very particular type and has become extremely popular—thirty-two of these machines have already been produced in this country alone. It was its sponsors, too, who first obtained a permit from the Air Ministry for such a machine.

The whole idea behind the Drone has been to produce a machine which, while flying on an economically low power, will be safe and exceptionally easy to fly and will provide the pilot with the good outlook and comfort inseparable from the pusher type. From the Super Drone, which had a more powerful engine, increased aileron area and folding wings, development has proceeded more recently to the De Luxe model, which has a four-cylinder water-cooled Carden-Ford.

This had an elevator trimming device, a split undercarriage and a steerable tail wheel, while the very latest model has been given a sweep-back, specially slotted ailerons to reduce control drag, and a stronger undercarriage. The reason for the slight sweep back was concerned, of course, with the matter of noise reduction; by this means it has been possible to place the engine farther aft, thus permitting the airscrew to run well away from the trailing edge.

In this connection the Ground Trainer, which is made in two forms, one for initial ground instruction and the other for straight flights, should be mentioned. One club in this country is already concentrating on training with this preliminary type.

The specification of the De Luxe Drone is as follows: Span, folded, 10 ft.; length, 27 ft. 10 in.; weight empty, 400 lb., disposable load, 260 lb.; maximum speed, 75 m.p.h.; cruising speed, 62 m.p.h.; stalling speed, 28 m.p.h.; initial rate of climb, 480 ft./min.; cruising range, 300 miles; price, £325. Makers: Kronfeld Ltd., London Air Park, Feltham, Middlesex.



Another lightweight single-seater—the Luton Minor. (*Flight* photograph.)

Luton

DESIGNED to meet the demand for a straightforward little aeroplane with a good all-round performance, the Luton Minor is a single-seater parasol monoplane in which the wing is partially plywood covered in order to remove the necessity for rigging adjustments. Capt. Latimer-Needham's idea has been to produce a machine which would virtually fly itself off the ground and be reasonably viceless in the air, and to this end various wing arrangements and so forth have been extensively tested. The engine fitted to the prototype Minor is an Anzani, but production machines will be fitted with Aero Engine Sprites.

The specification of the Luton Minor is as follows: Span, 25 ft.; length, 19½ ft.; weight empty, 380 lb.; disposable load, 220 lb.; maximum speed, 80 m.p.h.; cruising speed, 70 m.p.h.; landing speed, 30 m.p.h.; price, £192 10s.